FEASIBILITY STUDY

Bostic, SR 1006
Grade Separation at Seaboard Railroad
Rutherford County
R-2618

Prepared by
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I. DESCRIPTION

This report covers a preliminary study of a proposed railroad grade separation on SR 1006 in Bostic. This project is included in the 1990-1996 Transportation Improvement Program (T.I.P.) for feasibility study and/or right-of-way protection. It is not currently funded. Location of the project is shown on Figure 1.

II. PURPOSE OF PROJECT

Existing Conditions

SR 1006 is the only major north-south street through the Town of Bostic. It is classified a Rural Minor Collector in the North Carolina Functional Classification System.

The cross section on SR 1006 varies from a 30-foot pavement with curb and gutter on one side to a 36-foot, face to face, curb and gutter roadway. There are sidewalks on both sides of the roadway north of the railroad tracks and on the east side of the road south of the tracks. All intersections along the project are at grade with stop signs on the minor route. Both the horizontal and vertical alignment are good through the project area. The tracks are located in the bottom of a sag vertical curve.

Development in the project area is commercial. The Bostic Fire Department is located just off SR 1006 on Depot Street, on the south side of the railroad tracks.

Railroad Operations

At the studied crossing, the Seaboard Railroad has a single track protected by standard flashing light signals and gates. Eighteen scheduled train movements occur daily at the crossing with eight of the movements being through trains and the remaining ten being switching movements. This results in the crossing being blocked for considerable periods each day. Interruption of traffic service by train movements results in severe problems. Fire and other emergency services are severed from areas on the other side of the studied crossing.

There are no convenient alternative routes with grade separations available when SR 1006 is blocked by train movements. The adjacent crossing on SR 1583 would be blocked by the same trains, and the nearest crossing with a grade separation requires 5.6 miles of out-of-direction travel including 0.8 mile on a graveled roadway and 1.0 mile on a soil roadway. This route is highly circuitous, involving numerous turns and the use of six different secondary roads other than SR 1006.

Traffic Volumes, Capacity, and Accident Record

The present annual average daily traffic on SR 1006 at the railroad crossing is approximately 3500 vehicles per day (vpd). This volume is expected to increase to approximately 6,400 vpd by the year 2010.

The studied crossing has had no reported accidents over the past three years.

Need for Project

The provision of a grade separation on SR 1006 is needed to provide increased safety and adequate capacity for existing and future traffic volumes. The construction of the studied separation would eliminate the accident potential and delays resulting from the at-grade crossing. The grade separation would also provide a higher level of traffic service and would improve emergency access.

The calculated exposure index (18 trains per day x 6,400 vehicles per day) is 115,200. This exposure index is considerably greater than the criteria of 30,000 utilized for consideration of railroad separations in urban areas.

III. RECOMMENDATIONS AND COSTS

The construction of a railroad overpass on SR 1006 is warranted. The proposed bridge over the Seaboard Railroad tracks should be located slightly east of the existing at-grade crossing. This location will enable the construction to miss the potentially historic store building located on the west side of SR 1006 between SR 1561 and the railroad and will provide a slight improvement to the alignment of SR 1006. A two-lane bridge with a sidewalk on the east side is recommended. Approximately 800 feet of approach work will be required, extending from Concord Road to just north of Pearidge Road. The construction of the grade separation will necessitate the closing of the Depot Street intersection with SR 1006 due to the high fill on SR 1006. During the construction period, traffic will have to be detoured over SR 1576, SR 1583 and SR 1561 since there is no room for an on site detour.

The estimated costs of the project are as follows:

Construction	$ 750,000
Right-of-Way	350,000
Total	$1,100,000

The construction cost includes engineering and contingencies and the right-of-way cost includes relocation, acquisition, and utility costs.

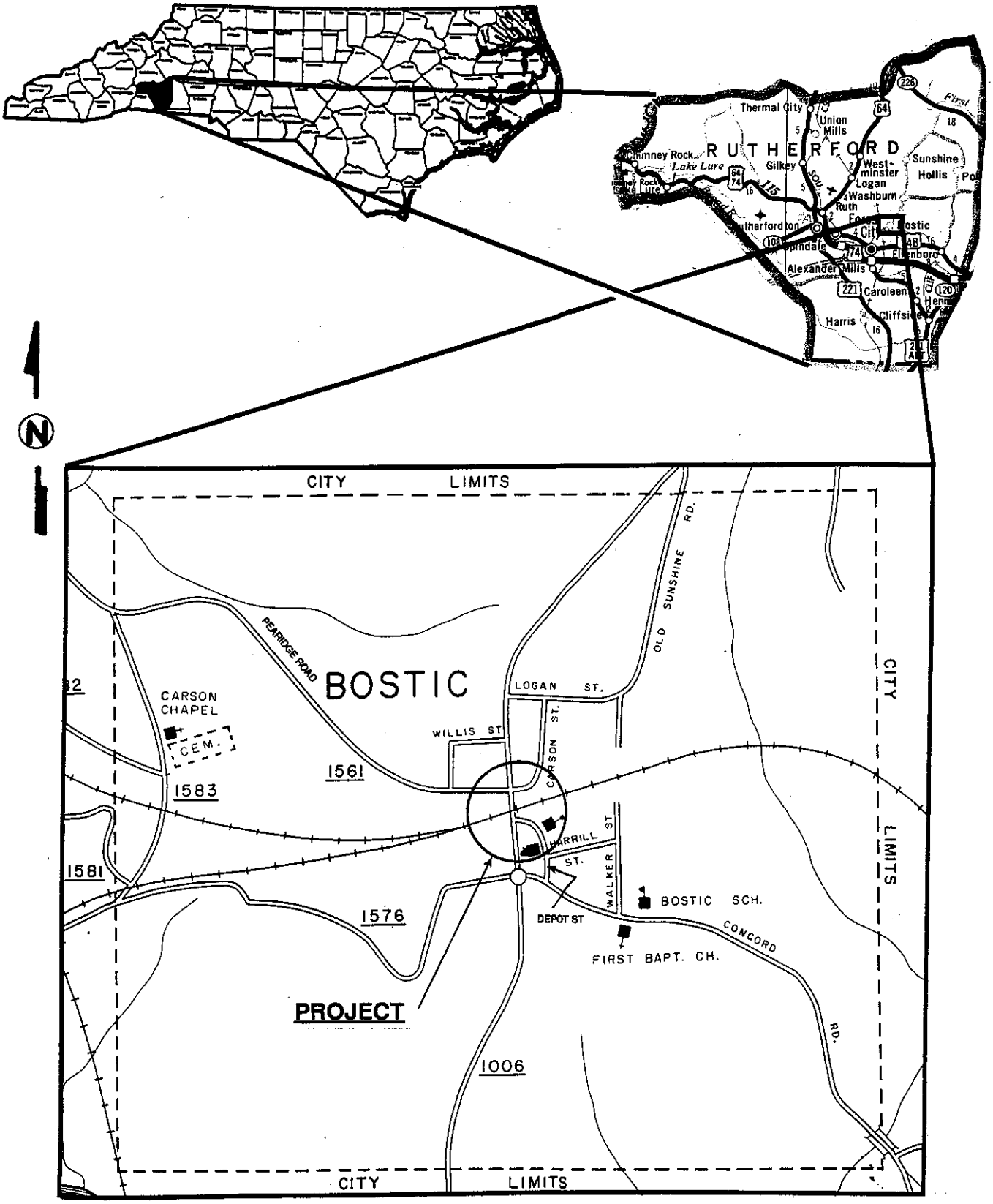
IV. ENVIRONMENTAL EFFECTS

The implementation of the proposed project is not expected to result in any significant impact on the environment. The construction of the project will require the relocation of 3 businesses. The project will result in increased noise levels for development adjacent to the roadway. Other impacts will be primarily related to the actual construction of project and will cease upon completion of the project. These include minor erosion and siltation, increased noise levels from construction machinery, and delay and inconvenience to motorists using SR 1006.

V. FUTURE ACTIVITIES

If the project is to be implemented at a future date, all feasible alternatives and their associated impacts will need to be evaluated in a planning/environmental document prior to that time, and a final decision made as to the most appropriate improvement.

RDB/rm



NORTH CAROLINA DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS
PLANNING AND RESEARCH BRANCH

BOSTIC
SR 1006, GRADE SEPARATION
AT SEABOARD RAILROAD
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FIG. 1